In the Specification:

Page 1, amend the paragraph from lines 19 to 28 as follows:

One miniaturized sensor platform with integrated channels for controlling the flow of sample over a sensor/sample interface that is available from Texas Instruments Incorporated of Dallas, Texas, provides one low-cost, portable electronic biosensor platform that accommodates such de-centralized testing. This sensor platform incorporates a miniature surface plasmon resonance (SPR) sensor. By measuring the light reflection properties of a gold surface as targeted molecules bind to it, real-time detection of these targeted molecules is possible. This sensor platform is described in detail in U.S. Patent ~~S/N~~ 6,183,696, entitled *Optically based miniaturized sensor with integrated fluidics*, issued on February 6, 2001 to Elkind et al., assigned to the assignee of the present invention, and is incorporated in its entirety by reference herein.

Page 2, amend the paragraph from lines 7 to 27 as follows:

In general, analyte molecules that are dissolved or suspended within the liquid must make contact with the sensing surface of the biosensor in order to provide accurate measurements of any analyte. Usually, this process requires that the analyte molecules diffuse to the surface of the biosensor interface making contact with the liquid. This can be a very slow process, depending on the size of the analyte particles. Smaller molecules move faster through the liquid, while protein molecules, for example move more slowly. Molecules having beads attached for amplification or microorganisms such as E. coli ~~Ecoli~~ are comparatively large, and therefore move more slowly through the liquid by a process known as shear-enhanced diffusivity. This slow transport process has been addressed in the prior art by use of high flow rates to accelerate the mass transport flux of analyte to the biosensor surface, rather than relying simply on the diffusion process alone. In addition, recirculation of the sample can accommodate testing of small sample volumes. Although such flow systems have improved the sensitivity and reliability of biosensor measurements,

these flow systems have been problematic. This is because these known flow systems use tubular flow structures that are characterized by a center region where liquid is flowing and an outer (edge, or depletion) region that can be several microns thick where there is no flow. Since this depletion region is static (has no laminar flow), the diffusion process described above must still be relied upon in order to ensure that reagents pass through the depletion region to make contact with the sensing surface of the biosensor. This diffusion process can be undesirably time consuming. In addition, these peripheral technologies add a great deal of bulk and cost to the instrument.